

Hydraulic Fracturing Fluid Product Component Information Disclosure

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| Fracture Date | 9/2/2011 |
| State: | Pennsylvania |
| County: | Susquehanna |
| API Number: | 37-115-20376 |
| Operator Name: | Cabot Oil & Gas |
| Well Name and Number: | Smith 8H |
| Longitude: | -75.910489 |
| Latitude: | 41.698886 |
| Long/Lat Projection: | NAD83 |
| Production Type: | Gas |
| True Vertical Depth (TVD): | 7,194 |
| Total Water Volume (gal)*: | 4,960,788 |

Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|-----------------|-----------------|----------------------|--|--|--|--|----------|
| Water | | Carrier / Base Fluid | | | 100.00% | 88.63187% | |
| Sand (Proppant) | | Proppant | | | 100.00% | 11.23359% | |
| 15% HCl | Regent Chemical | Acid Package | Hydrochloric acid | 7647-01-0 | 15.00% | 0.08490% | |
| Plexhib 256 | Pumpco Services | Corrosion Inhibitor | Methyl Alcohol | 67-56-1 | 40.00% | 0.00050% | |
| | | | Propargyl alcohol | 107-19-7 | 8.00% | 0.00010% | |
| Ferriplex 40 | Pumpco Services | Iron Control Product | Sodium Hydroxide | 001310-73-2 | 1.00% | 0.00005% | |
| | | | Sodium Sulfate Anhydrous | 007757-82-6 | 2.00% | 0.00009% | |
| | | | Trisodium Nitilotriacetate | 018662-53-8 | 40.00% | 0.00189% | |
| Plexbreak 145 | Pumpco Services | Nonemulsifier | Methyl Alcohol | 67-56-1 | 15.00% | 0.00021% | |
| Plexslick 921 | Pumpco Services | Friction Reducer | Petroleum Distillate | 064742-47-8 | 30.00% | 0.02625% | |
| Greenhib 677 | Pumpco Services | Scale Inhibitor | Salt of phosphonomethylated diamine | N/A | 25.00% | 0.01176% | |
| Plexcide 24L | Pumpco Services | Anti Bacterial Agent | Tetrahydro-3, 5-Dimethyl-2H-1,3,5-thiadiazine-2-thione | 533-74-4 | 24.00% | 0.00754% | |
| | | | Sodium Hydroxide | 1310-73-2 | 4.00% | 0.00126% | |
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* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier’s Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information.

Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration’ s (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.